

Tennessee Comprehensive Assessment Program

Item Sampler

Grade 7

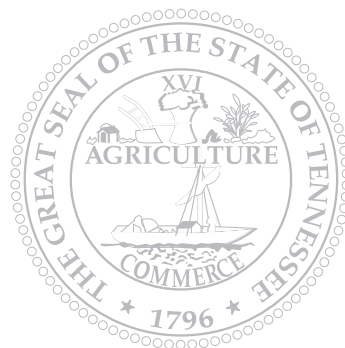


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Introduction

What is the TCAP Achievement Test?

The TCAP Achievement Test is a multiple-choice test designed to measure student achievement in certain skills in five subject areas: Reading, Language Arts, Mathematics, Science, and Social Studies. The sample questions in this On-Line Item Sampler are representative of the item types and item formats that will be used in the actual test, including those questions with art and without art.

What are the questions testing?

Questions are written to test student performance in State and national content areas. The State Content Standards and Performance Indicators were developed by the Tennessee Department of Education. These Standards and Performance Indicators are listed on the State Department of Education Web site at <http://www.state.tn.us/education/ci/cistandards.htm>.

Who will be tested?

All students in grades 3 through 8 will be tested.

How long will the tests take?

The length of the tests will vary, depending on the grade level. The time limits are generous and allow most students time to finish. Extended time limits apply for students using accommodations.

How do I use the sample questions?

These questions provide information for students, parents, and teachers about the TCAP Achievement Test. The questions in the On-Line Item Sampler are representative of most of the question types that will be on the TCAP Achievement Test.

These questions can be used as a classroom learning session or as an individual, short practice test to prepare students for the actual test. Item types with and without art are presented to better familiarize students with the actual test format.

An answer key for the sample questions is provided at the end of this On-Line Item Sampler.

How will the tests be scored?

The test answers will be machine scored. Results from the test provide information about how well students performed on the content being tested.

May calculators be used?

Calculators may be used on TCAP Achievement Grades 3-8 Mathematics subtests, Part 1 and Part 2. Calculators **may not** be used on any part of the K–2 test.

Which test accommodations may be used?

The Achievement Test may be administered using various procedures (or accommodations) that are used during the student’s daily educational program. Certain conditions must be met for students to be eligible for Special and English Language Learner Accommodations.

What are some tips for preparing students for the test?

Remind students to:

Relax: It is normal to be somewhat anxious before the test. Remember that the score is only one of a number of measures of performance.

Listen: Listen to and read the test directions carefully.

Plan Use of Time: First, answer all the questions you are sure about. Do not spend too much time on any one question. If a question seems to take too long, skip it and return to it later if you have extra time.

Pause and Think: If you are not sure how to answer a question, carefully read it again. Rule out answer choices that you know are incorrect and then choose from those that remain.

Reading and Language Arts



Directions Read the following passage. Then answer Numbers 1 through 7.

Clean, Pure Water

What is the most important nutrient your body needs every day? If you guessed water, you're right! All living things need water to survive. Water is a main part of the makeup of every cell in your body. The body itself is 80 percent water, and the brain is 85 percent water. Food is carried by water-based fluids to all your cells, and wastes are carried away by water-based fluids. Water is necessary for digestion, circulation, and many other body functions.

Yet every day, your body loses the same amount of water that a 2-liter soda bottle would hold. Where does all that water come from? If you drink enough to replace the loss, all is well. If you don't, then problems will develop. Even a small drop in the percentage of water in the body can cause body functions to slow down. It can cause you to feel tired and make your brain "fuzzy," so it is harder to focus on math or reading.

Some people say, "I just don't like to drink water. I drink soda all day long instead, since it's mostly water anyway."

Those people are wrong in thinking that soda is an adequate substitute for water! If you washed your face with soda, would it feel clean? That's ridiculous, right? Then why would you think of washing the inside of your body with soda? It might taste good, but it's not helpful to your body. In fact, it can even be harmful. Soft drinks actually steal water and minerals from the body. Sodas are one of the main factors blamed for the rising number of people—especially children in the United States today—who are overweight and are developing diabetes at younger and younger ages. The sugars and strong acid in soda also cause tooth decay and other diseases. Instead of adding fluids to the cells, the caffeine in many sodas pulls water from the body and interferes with digestion. Carbonated soft drinks are high in phosphorus. That phosphorus may replace the calcium and other minerals in bones and weaken them. A study of 460 ninth- and tenth-grade students showed that those who drank sodas of any kind were five times more likely to break a bone. If that's not bad enough, the sugar from one can of soda will suppress your immune system for up to six hours.

How about diet sodas? They don't have any sugar, so they must be much better, right? Sorry to say, the answer again is quite possibly no. The artificial sweeteners in diet sodas are thought to be associated with some serious diseases of the kidneys, liver, and brain. Some of the newer sweeteners have been released based on short-term testing; they haven't been around long enough for researchers to see any possible long-term consequences of their use. The subject is controversial, because the soda manufacturers' strong marketing and advertising forces have a big stake in the success of these very profitable products. And sodas taste so good and look so tempting in the advertisements.

The bottom line is that you can be very sure that the best replacement for the water your body loses every day is nothing other than clean, pure water! As Olympic gold medalist Nabil Mabuti says, "Drinking six to eight glasses of water a day is a healthy thing to do." Your body will love you for it!

Reporting Category: 1 Content

Performance Indicator: 7.1.spi.17 Identify the author's purpose for writing and/or the reader's purpose for reading.

1 The author's purpose for writing this passage was probably to

- A** encourage people to drink water
- B** convince people to drink more soda
- C** discuss the chemicals contained in soda
- D** make students feel brighter and less tired

Reporting Category: 2 Meaning

Performance Indicator: 7.1.spi.7 Distinguish between fact and opinion within context.

2 Which sentence from the passage is an opinion?

- F** All living things need water to survive.
- G** Soft drinks actually steal water and minerals from the body.
- H** And sodas taste so good and look so tempting in the advertisements.
- J** Drinking six to eight glasses of water a day is a healthy thing to do.

Reporting Category: 7 Techniques and Skills

Performance Indicator: 7.2.spi.8 Identify individual written selections as technical, narrative, persuasive, and/or descriptive in mode.

3 The passage is an example of which type of writing?

- A** narrative
- B** technical
- C** persuasive
- D** descriptive

Reporting Category: 7 Techniques and Skills

Performance Indicator: 7.1.spi.19 Identify examples of propaganda techniques (i.e., bandwagon).

4 Read the sentence below.

As Olympic gold medalist Nabil Mabuti says, “Drinking six to eight glasses of water a day is a healthy thing to do.”

Which propaganda technique is used in this sentence?

- F** testimonial
- G** bandwagon
- H** loaded words
- J** mudslinging

Reporting Category: 3 Vocabulary

Performance Indicator: 7.1.spi.8 Decode unknown grade level words in context, using previously learned strategies, such as analysis of affixes, as aids in determining meaning.

5 In the fifth paragraph of the passage, the word *controversial* means

- A** well-researched
- B** hard to understand
- C** scientifically proven
- D** open to argument

Reporting Category: 4 Writing/Organization

Performance Indicator: 7.2.spi.6 Supply a missing piece of information in an outline.

6 Greg started to outline the passage.

- I. Why water is important
 - A. Water's presence in the body
 - B. Water's purpose in the body
- II. Water loss
 - A. How water is lost
 - B. Results of losing water
- III. Soda instead of water
 - A. Harmful ingredients in soda
 - 1. Sugar
 - 2. _____
 - 3. Caffeine
 - B. Damage done by soda
 - 1. Loss of bone strength
 - 2. Disease

What information is missing from the blank line in Part III?

- F** Water
- G** Acid
- H** Calcium
- J** Minerals

Reporting Category: 5 Writing Process

Performance Indicator: 7.2.spi.4 Identify the audience (formal/informal) for which the text is written.

7 Which sentence best describes the type of audience this passage was written for?

- A** It was written for adults because the language is formal and scholarly.
- B** It was written for scientists because it presents many scientific facts.
- C** It was written for professional athletes because it quotes an Olympic gold medalist.
- D** It was written for an informal audience because it talks to the reader as “you.”

Reporting Category: 3 Vocabulary

Performance Indicator: 7.1.spi.10 Recognize and use grade appropriate and/or content specific vocabulary within context.

8 Read the sentence below.

The legitimate government was overthrown in the revolution.

The word *legitimate* means

- F** failed
- G** lawful
- H** temporary
- J** grotesque

Reporting Category: 6 Grammar Conventions

Performance Indicator: 7.3.spi.1 Identify the correct use of commas (i.e., compound sentences, coordinating conjunctions, introductory words, appositives, and interrupters) within context.

9 Which sentence is written correctly?

- A** Excuse me Jennifer, did you leave your camera under that tree?
- B** The nests of bald eagles, are built on the highest mountaintops.
- C** The song of the thrushes, a shrill “Peeeeer,” rings out loudly as the sun begins to set.
- D** These are the best pictures I’m sure you’ll agree, that we have of the nesting birds.

Reporting Category: 6 Grammar Conventions

Performance Indicator: 7.3.spi.2 Recognize usage errors occurring within context (e.g., double negatives, troublesome words: to, too, two; their, there, they’re; lie, lay; sit, set).

10 Which sentence is written correctly?

- F** The phone rung ten times, but no one answered it.
- G** Kirk did not have no money to buy popcorn at the movie.
- H** That cat lies on the windowsill all day, soaking up the sunlight.
- J** Jed set impatiently on the bench waiting for the coach to put him back in the game.

Reporting Category: 7 Techniques and Skills

Performance Indicator: 7.3.spi.9 Identify correctly or incorrectly spelled words in context.

11 Which sentence does not have spelling errors?

- A** On Febuary 5, Mr. Jones gave an English grammer test.
- B** Michael passed his driver's license examination on Thursday.
- C** Our mischievious puppy chewed up the only pair of slippers I posess.
- D** Lauren was dissapointed with the job of seperating the ripe fruits from the unripe ones.

Mathematics



Reporting Category: 1 Number and Operations

Performance Indicator: 7.1.spi.6 Connect percents greater than 100 and percents less than one to real-world situations.

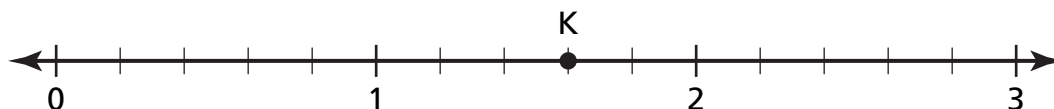
1 In April, a store had a profit of \$4,600. In May, the store had a profit that was 120% of its profit in April. How much profit did the store have in May?

- A** \$3,400
- B** \$4,729
- C** \$5,520
- D** \$9,200

Reporting Category: 1 Number and Operations

Performance Indicator: 7.1.spi.11 Connect rational numbers to locations on the number line.

2 Look at the number line below.



What number does point K represent?

- F** 0.6
- G** 1.3
- H** 1.5
- J** 1.6

Reporting Category: 2 Algebraic Thinking

Performance Indicator: 7.2.spi.2 Apply function rules.

3 Look at the table below.

x	y
1	4
2	8
3	12
4	16
5	20

Which rule is represented in the table?

- A $y = 4x$
- B $y = 3x$
- C $y = x + 3$
- D $y = x + 4$

Reporting Category: 2 Algebraic Thinking

Performance Indicator: 7.2.spi.5 Represent mathematical statements and real-world situations using symbols.

4 In one month, Mr. Smith's class (S) planted 3 times as many flowers as Ms. Columbus' class (C). Ms. Baker's class (B) planted 5 more flowers than Mr. Smith's class. Which mathematical statement about the number of flowers each class planted is true?

- F $B > S > C$
- G $B < C > S$
- H $C < B < S$
- J $S > B < C$

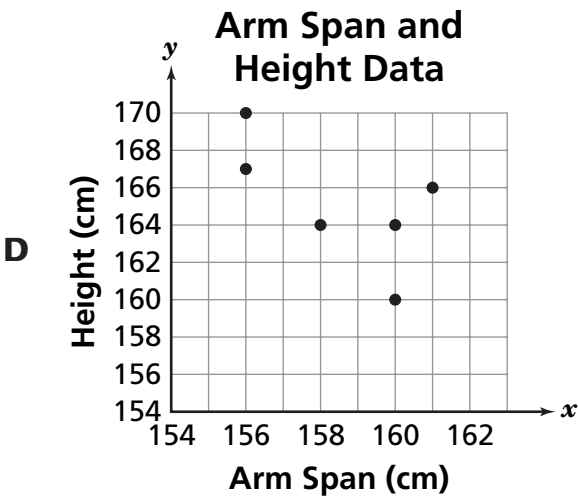
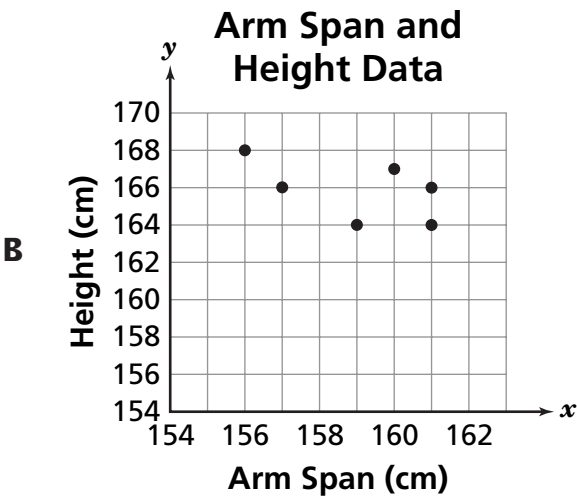
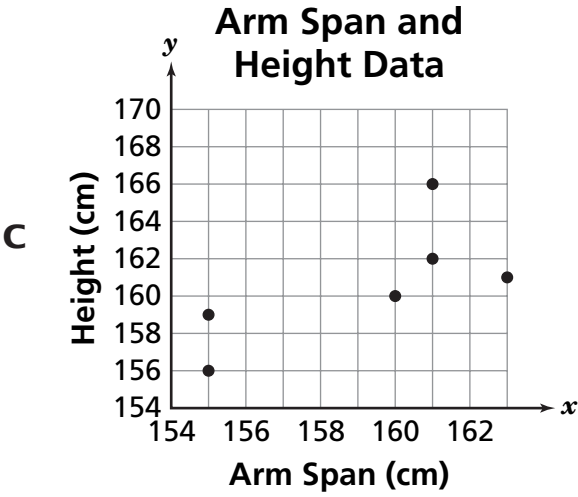
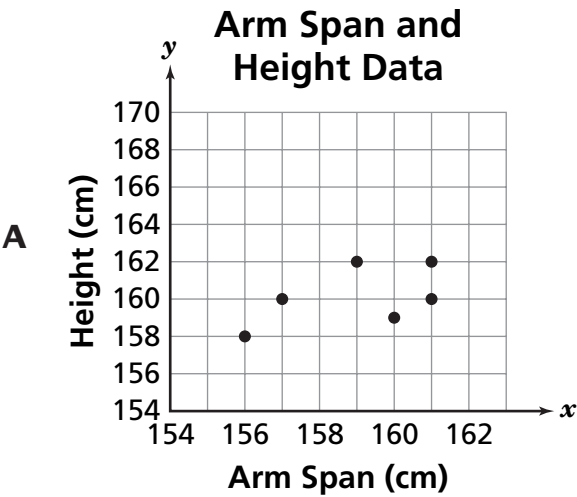
Performance Indicator: 7.2.spi.10 Select the scatterplot that represents the data in tabular form.

- 5 A student measured the arm span and height of six people. The table below shows this data.

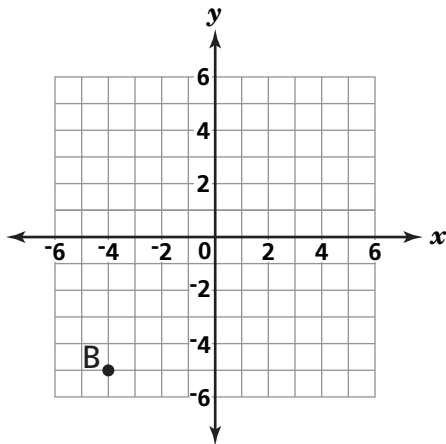
Arm Span and Height Data

Arm Span (cm)	156	157	159	160	161	161
Height (cm)	158	160	162	159	160	162

Which scatterplot represents this data?



6 Look at the coordinate grid below.



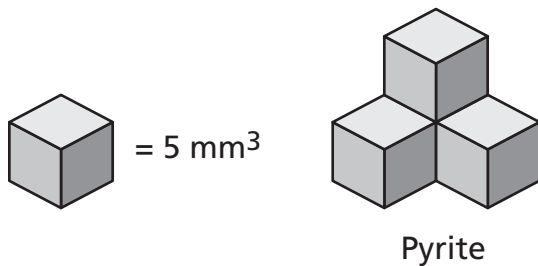
Which ordered pair represents point B?

- F** (4, -5)
- G** (5, -4)
- H** (-4, -5)
- J** (-5, -4)

Reporting Category: 4 Real World Problem Solving

Performance Indicator: 7.3.spi.7 Apply spatial reasoning and visualization to solve real-world problems.

- 7** The mineral pyrite tends to form cube-shaped crystals. A geologist finds this particular piece of pyrite shown below.



Each cube has an approximate volume of 5 cubic millimeters. What is the volume of the piece of pyrite?

- A** 9 cubic millimeters
- B** 15 cubic millimeters
- C** 20 cubic millimeters
- D** 45 cubic millimeters

Reporting Category: 4 Real World Problem Solving

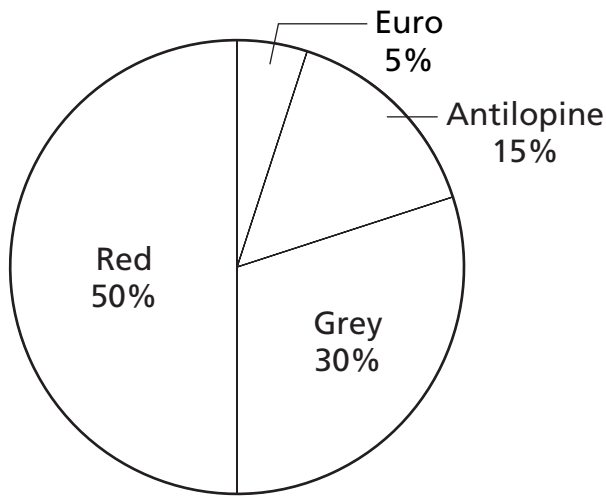
Performance Indicator: 7.2.spi.8 Solve real-world problems involving one-step linear equations.

- 8** On Saturday, 3 students babysat 10 small children for 1 hour. They received a total of \$19.50 for their work. To divide the money evenly, one student wrote the equation $3x = \$19.50$. How much money did each student receive?

- F** \$6.25
- G** \$6.50
- H** \$6.75
- J** \$7.00

- 9** The circle graph below shows the percent of different types of kangaroos at a wildlife park in Australia.

Kangaroos at a Wildlife Park



If there are a total of 40 kangaroos at the wildlife park, how many of them are Euro kangaroos?

- A** 2
- B** 5
- C** 20
- D** 35

Reporting Category: 5 Data Analysis and Probability

Performance Indicator: 7.5.spi.3 Determine the mean for a data set.

- 10** The black wallaroo is one of the smallest species in the kangaroo family. The list below shows the weights, in kilograms, of some black wallaroos.

12, 15, 17, 18, 20

What is the mean weight of these kangaroos?

- F** 14.4 kilograms
- G** 16.2 kilograms
- H** 16.4 kilograms
- J** 17.0 kilograms

Reporting Category: 6 Measurement

Performance Indicator: 7.4.spi.3 Convert from one unit to another within the same system.

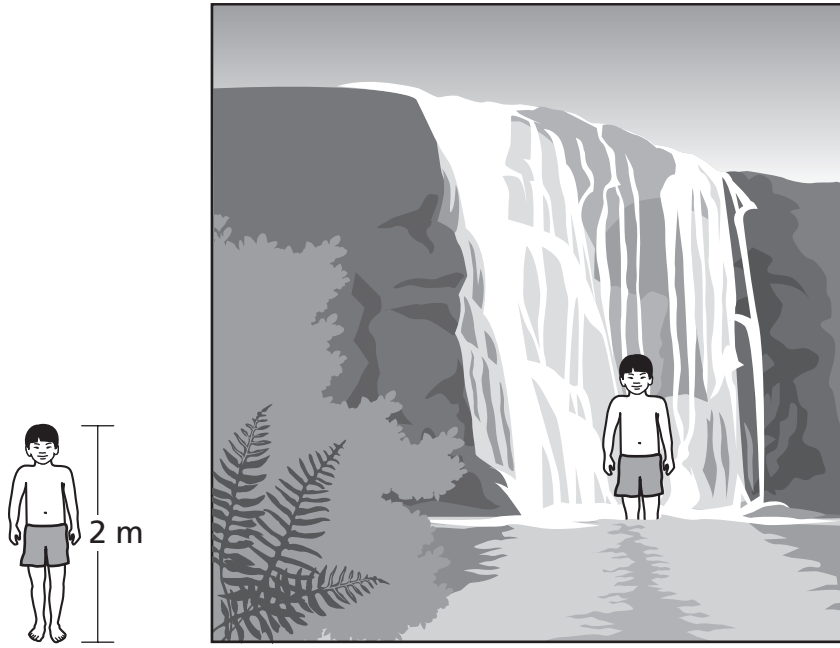
- 11** A caterpillar measures 2.5 centimeters. How long is the caterpillar in millimeters?

- A** 0.025 millimeters
- B** 0.25 millimeters
- C** 25 millimeters
- D** 250 millimeters

Reporting Category: 6 Measurement

Performance Indicator: 7.4.spi.6 Estimate length, perimeter, circumference, area, and volume using a variety of strategies.

12 Carl took a picture of his friend in front of this waterfall.



If Carl's friend is 2 meters tall, what is the approximate height of the waterfall?

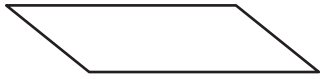
- F** 2 meters
- G** 4 meters
- H** 8 meters
- J** 12 meters

Reporting Category: 7 Geometry

Performance Indicator: 7.3.spi.4 Classify polygons by properties.

13 Which polygon is not a quadrilateral?

A



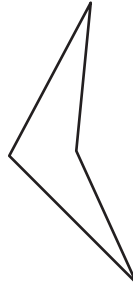
C



B



D

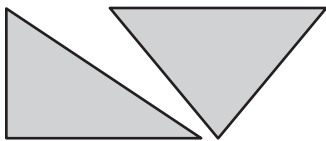


Reporting Category: 7 Geometry

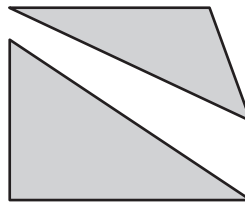
Performance Indicator: 7.3.spi.3 Determine congruence of line segments, angles, and polygons.

14 Which pair of triangles is congruent?

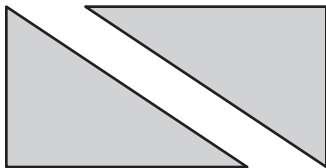
F



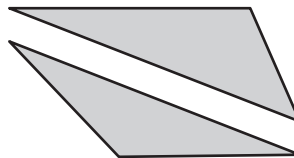
H



G



J





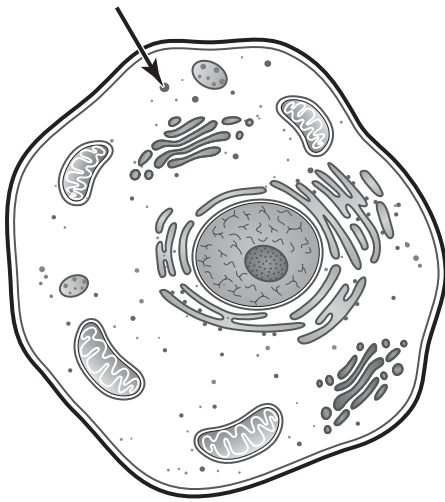
Reporting Category:

1 Cell Structure and Function

Performance Indicator:

7.1.spi.1 Recognize basic structures that most cells share (i.e., nucleus, cytoplasm, cell membrane, cell wall, ribosome, mitochondria, chloroplast, vacuole, lysosome).

1 Look at this diagram of an animal cell.



The arrow is pointing to

- A** the cytoplasm
- B** the nucleus
- C** a mitochondrion
- D** a ribosome

Reporting Category: 1 Cell Structure and Function

Performance Indicator: 7.1.spi.3 Distinguish between plant and animal cells.

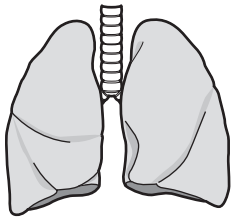
2 A scientist knows when she is looking at a plant cell instead of an animal cell because plant cells have

- F** a large central vacuole
- G** a small central nucleus
- H** a flexible membrane around the cell
- J** a fluid-like substance within the cell

Reporting Category: 2 Food Production and Energy for Life

Performance Indicator: 7.3.spi.3 Select the structures that animals use to obtain oxygen.

3 Look at this diagram.



Which organism uses only this structure to take in oxygen?

- A** butterfly
- B** catfish
- C** frog
- D** raccoon

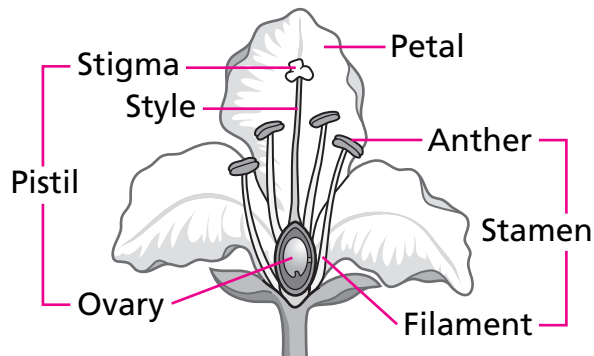
- 4** A science teacher wrote this equation for photosynthesis.



Which of these do *X* and *Y* represent?

- F** oxygen and soil
- G** soil and sunlight
- H** carbon dioxide and oxygen
- J** carbon dioxide and sunlight

5 Look at this diagram of a flower.



Which statement explains why flowers have filaments?

- A** They help plants make food.
- B** They help plants release heat.
- C** They help plants absorb water.
- D** They help plants display pollen.

Reporting Category: 3 Heredity and Reproduction

Performance Indicator: 7.4.spi.2 Distinguish between sexual and asexual methods of reproduction.

6 Which statement about sexual reproduction is true?

- F** Each parent contributes half of their genetic material to each offspring.
- G** Each parent contributes their best genetic material to produce healthier offspring.
- H** One parent produces both genetically identical offspring and offspring with some genetic variation.
- J** One parent produces genetically identical offspring with no genetic contribution from another parent.

Reporting Category: 4 Atmospheric Cycles

Performance Indicator: 7.8.spi.3 Analyze data and make predictions about weather given a scenario.

7 Carlos hears a weather forecast that says high pressure is moving into the area.

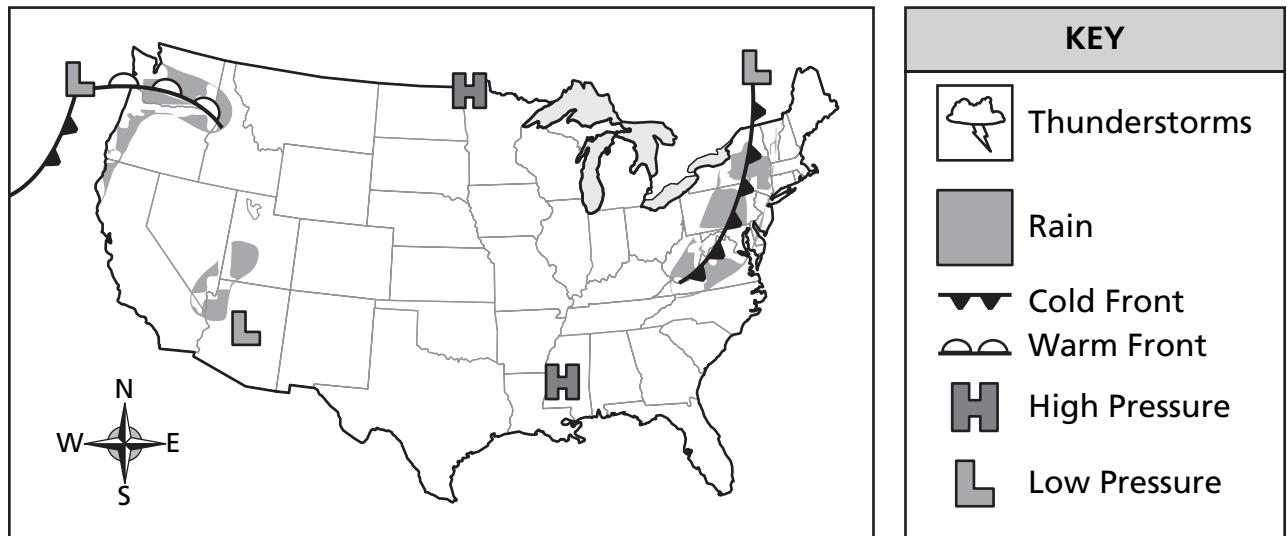
Which weather condition will Carlos most likely observe?

- A** heavy precipitation
- B** increasing humidity
- C** rising temperatures
- D** decreasing cloudiness

Reporting Category: 4 Atmospheric Cycles

Performance Indicator: 7.8.spi.4 Interpret weather data using a weather map.

8 Look at this weather map.



According to the map, which region has a cold front with rain moving through?

- F** northeast
- G** southeast
- H** northwest
- J** southwest

Reporting Category:

5 Structure and Properties of Matter

Performance Indicator:

7.12.spi.3 Classify substances as elements or compounds from their symbols or formulas.

9 Which formula represents a compound?

- A** H_2
- B** O_3
- C** Na
- D** HCl

Reporting Category:

5 Structure and Properties of Matter

Performance Indicator:

7.12.spi.4 Compare the motion and arrangement of molecules in solids, liquids, and gases.

10 Which statement correctly describes what happens to the molecules in a block of ice when the ice melts?

- F** The molecules move faster.
- G** The molecules move slower.
- H** The distance between molecules becomes larger.
- J** The distance between molecules remains the same.

Social Studies



Reporting Category: 1 Economics

Performance Indicator: 7.2.spi.2 Define renewable and nonrenewable resources.

1 Which of these is a renewable energy source?

- A** coal
- B** oil
- C** uranium
- D** wind

Reporting Category: 1 Economics

Performance Indicator: 7.2.spi.4 Interpret economic issues as expressed with maps, tables, diagrams, and charts.

2 Home Energy Costs in
the United States—2005
(by percentage of total cost)

Heating and cooling	45%
Lighting and appliances	34%
Water heating	13%
Refrigeration	8%

Source: U.S. Department of Energy

According to the chart, the typical household in the United States spent the most money on

- F** refrigeration
- G** water heating
- H** heating and cooling
- J** lighting and appliances

Reporting Category: 2 Governance and Civics

Performance Indicator: 7.4.spi.3 Recognize how the boundaries of Congressional districts change in the state of Tennessee (i.e., statutory requirements, population shifts, political power shifts).

3 Congressional districts are drawn on the basis of

- A** acreage
- B** population
- C** government spending
- D** average family income

Reporting Category: 2 Governance and Civics

Performance Indicator: 7.6.spi.2 Differentiate between the rights, roles, and state of the individual in relation to the general welfare in various regions of the world.

4

- freedom of religion
- multi-party elections
- right to run for public office

In which country would all of these freedoms most likely be found?

- F** China
- G** Great Britain
- H** Iran
- J** Saudi Arabia

Reporting Category: 3 Human Geography

Performance Indicator: 7.3.spi.4 Distinguish the differences among rural, suburban, and urban communities.

5 Which area would most likely have the lowest population density?

- A** a city
- B** a suburb
- C** a farming area
- D** a manufacturing area

Reporting Category: 3 Human Geography

Performance Indicator: 7.1.spi.1 Recognize cultural definitions (i.e., language, religion, customs, political system, economic system).

6

Judaism
Hinduism
Buddhism

Which of these best describes the terms above?

- F** customs
- G** governments
- H** languages
- J** religions

Reporting Category:**4 Physical Geography****Performance Indicator:**

7.3.spi.11 Recognize specific physical processes that operate on the Earth's surface (i.e., erosion, volcanoes, earthquakes, wind and water currents, plate tectonics, and weathering).

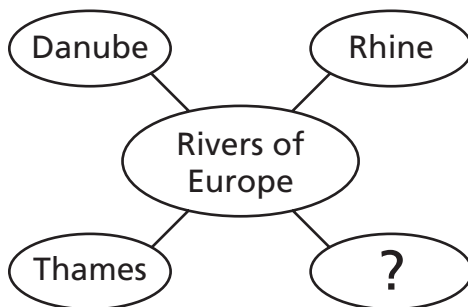
7 Which term describes the physical process that causes continents to move on Earth's surface?

- A** erosion
- B** weathering
- C** ocean currents
- D** plate tectonics

Reporting Category:**4 Physical Geography****Performance Indicator:**

7.3.spi.9 Identify the location of Earth's major landforms and bodies of water (i.e., Rockies, Andes, Himalayas, Alps, Urals, Sahara desert, Nile River Valley, Great Plains, Mississippi River, Amazon River, Thames River, Seine River, Rhine River, Danube River, Tigris River, Euphrates River, Ganges River, Volga River, Yellow River).

8



Which river best completes the diagram above?

- F** Nile
- G** Seine
- H** Tigris
- J** Yellow

Reporting Category: 5 History

Performance Indicator: 7.5.spi.1 Identify the causes and consequences of urbanization (i.e., industrial development, education, health care, cultural opportunities, poverty, overcrowding, disease, pollution, crime).

9 Which of these usually decreases as a consequence of urbanization?

- A** crime
- B** illiteracy
- C** overcrowding
- D** pollution

Reporting Category: 5 History

Performance Indicator: 7.5.spi.2 Identify reasons people choose to settle in different places (i.e., occupation, family, climate, natural resources).

Directions Use the passage below and your own knowledge to do Number 10.

The Dust Bowl

During the drought of the 1930s, the Great Plains states were devastated by severe dust storms that ruined many of the region's farms. Thousands of farm families migrated to California in search of any work that would provide enough money to feed their hungry children.

10 Why did many families leave the Dust Bowl region and move to California in the 1930s?

- F** to find agricultural jobs
- G** to enjoy a milder climate
- H** to find more educational opportunities
- J** to benefit from generous welfare programs

Answer Key

Reading and Language Arts

1	A
2	H
3	C
4	F
5	D
6	G
7	D
8	G
9	C
10	H
11	B

Mathematics

1	C
2	J
3	A
4	F
5	A
6	H
7	C
8	G
9	A
10	H
11	C
12	G
13	C
14	G

Science

1	D
2	F
3	D
4	J
5	D
6	F
7	D
8	F
9	D
10	F

Social Studies

1	D
2	H
3	B
4	G
5	C
6	J
7	D
8	G
9	B
10	F